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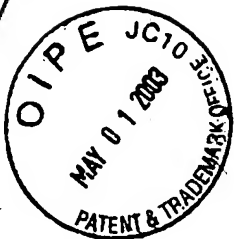
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2126

#6

In re Patent Application
of Applicant(s):

DIETER E. STAIGER

Serial No.: 10/004,471

Filed: 12/04/01

For: INTERCOMMUNICATION PROCESSOR

Commissioner for Patents
Washington, D. C. 20231

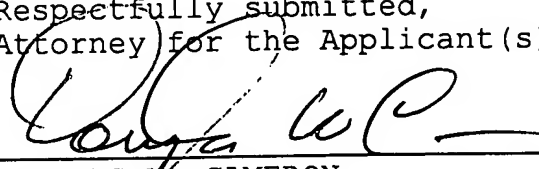
Enclosed is a copy of the Patent Prosecution Information received from the European Patent Office in response to the filing of a Counterpart PCT Application in the European Patent Office [International Application No. PCT/EP01/12470] filed on October 27, 2001. The Prosecution Information includes a PCT Written Opinion, the Attorney's Response, and the PCT Preliminary Examination Report.

If you did not receive the International Search Report, the Applicant will gladly forward this Report to your office.

If there are any questions, please contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,
Attorney for the Applicant(s)

by


DOUGLAS W. CAMERON
Reg. No. 31,596
914-945-3244

IBM Corporation
Intellectual Property Law Department
P. O. Box 218
Yorktown Heights, N. Y. 10598
Telephone No.: (914) 945-3244
Fax No.: (914) 945-3281

Attorney Docket No.:

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PATENT PROSECUTION INFORMATION

IBM Confidential

Privilege Review Required

Docket No.: DE9-1999-0094

28 March 2003

Date

To: US Attorney: Douglas W Cameron

YOR

Name

Location

For above docket having a counterpart application pending in the U.S. or a US patent granted, attached please find copies and translations/abstracts (as appropriate):

- ☐ PCT Search Report and References
(from the EPO which is the Searching Authority)
- X PCT Written Opinion
- X Attorney's Response
- X PCT Preliminary Examination Report

IBM
YORKTOWN
2003 MAR -7 11:11:20
INTELLECTUAL PROPERTY
LAW DEPT.

Barbara Kienle

Barbara Kienle

- Germany Intellectual Property Department

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Teufel, Fritz
IBM DEUTSCHLAND GMBH
Intellectual Property
Pascalstrasse 100
D-70548 Stuttgart
ALLEMAGNE

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

Date of mailing
(day/month/year) 26.02.2003

Applicant's or agent's file reference
DE919990094

IMPORTANT NOTIFICATION

International application No.
PCT/EP01/12470

International filing date (day/month/year)
27/10/2001

Priority date (day/month/year)
09/12/2000

Applicant
INTERNATIONAL BUSINESS MACHINES CORPORATION, et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

For the purpose of deciding whether the claimed invention is patentable or not, the elected Offices may apply criteria additional to or different from the criteria on which the international preliminary examination report is based (see Articles 27(5), 33(5)). Additional criteria may include e.g. exemptions from patentability and the requirements of enabling disclosure and of clarity and support of claims.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Barrio Baranano, A

Tel. +49 89 2399-8621



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DE919990094	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP01/12470	International filing date (day/month/year) 27/10/2001	Priority date (day/month/year) 09/12/2000
International Patent Classification (IPC) or national classification and IPC H04L29/06		
Applicant INTERNATIONAL BUSINESS MACHINES CORPORATION, et al		



1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 17/04/2002	Date of completion of this report 26.02.2003
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Bertini, S Telephone No. +49 89 2399 8985 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP01/12470

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-3,5-25	as originally filed	
4,4a-4b	with telefax of	11/12/2002

Claims, No.:

1-11	with telefax of	11/12/2002
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Drawings, sheets:

1/8-8/8	as originally filed
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2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the result of the message processing to be forwarded to a destination unit, wherein the third execution unit is configured to monitor the first set of registers in order to start presenting the result of the message processing once the processing of the message is complete.

Advantageously, a message is received to be processed and the kind of treatment to be performed with the received message is determined. Message specific information is stored specifying the contents of the received message and said determined treatment of a received message into a first set of registers which is monitored in order to start processing a message once a process execution unit is available for processing.

It is agreed that the claimed apparatus, system and method, after the amendments made after the Written Opinion, are not obviously derivable from any of the prior art documents of the Search Report.

2. Dependent claims 2 to 5, 7 to 9 and 11 contain further details of the apparatus of claim 1, of the system of claim 6 and of the method of claim 10 respectively. As they are dependent on claims 1, 6 and 10 respectively, they also satisfy the requirements for novelty and inventive step (Articles 33 (2) and (3) PCT).

results in higher manufacturing costs, since an additional processor has to be provided.

Another method used by real-time bus controllers are so called "filter register." Filter register are complemented by hardware comparators allowing to bring some 'relief' for the CPU(s) by reducing the interrupt rate and reducing time consuming message address compare operations. The message IDs to be filtered are stored in specific registers, e.g., 16 identifiers, and are compared with the messages approaching on the bus. Only messages having matching identifiers are forwarded to the CPU.

From US 5,832,397 an integrated communications apparatus is known for use in a vehicle control system for monitoring and controlling operational status of a plurality of vehicle systems, each vehicle system having a local control unit for controlling operation thereof, said local control units being accessible by means of a data communication line, said integrated communications apparatus comprising: at least one memory unit, a central processing unit for receiving and processing signals transmitted from said local control units, which signals are indicative of operational status of said plurality of vehicle systems, according to control programs stored in one of said at least one memory unit, and for generating control signals for transmission to said plurality of vehicle systems by means of said data communication line, and a programmable subprocessor for controlling communications between said central processing unit and said local control units by means of said data communication line, according to at least one of said control programs stored in one of said at least one memory unit.

US-A-4 625 308 (KIM KAP S ET AL) 25 November 1986, discloses a block input processing. The block input task receives blocks transmitted from the front-end subsystem 13022. The primary functions of this task are to validate the cyclic redundancy check (CRC), to acknowledge (or negative acknowledge) the block based on the

3. The device according to one claim 2, wherein the second execution unit (239) comprises three or more process execution units (240, 242, 244) having access to said first set of registers (238) for performing said determined treatment.

4. The device according to claim 2 or 3, wherein the second execution unit (239) comprises a second set of registers (246) being connected said at least one process execution unit (240, 242, 244) for storing information needed by said process execution unit (240, 242, 244).

5. The device according to claim 1, wherein the first execution unit (226) comprises an interface for configuring said memory device (236) with said control information being used to determine the treatment to be performed with a received message.

6. An intercommunication processing system for communication within and across networks, the system comprising a device for message processing according to one of the claims 1 to 5 and a switchboard device for providing a communication connection to said at least one data network (202 to 205) and to said at least one dedicated CPU (207, 208).

7. The intercommunication processing system according to claim 6, wherein said switchboard comprises a multiplexer on one hand connected to the first and third execution unit (226, 239) and on the other hand being prepared to be connected to several bus adapters (214 - 217) and said at least one CPU (207, 208).

8. The intercommunication processing system according to claim 7, wherein said switchboard further comprises an interrupt bus connected to the first execution unit (226) and on the other hand being prepared to be connected to several bus adapters (214 - 217) and said at least one CPU (207, 208).

9. The intercommunication processing system according to claim 7 or 8, wherein said switchboard further comprises a controller (232) for controlling said multiplexer, whereby said controller is configured to be governed either by said third execution unit (230) or by said at least one CPU (207, 208).

10. A method for message processing in a system for communicating with remote units over at least one data network (202 to 205) and with at least one dedicated CPU (207, 208), the method comprising the steps of:

receiving a message to be processed and determining the kind of treatment to be performed with the received message;

storing message specific information specifying the contents of the received message and said determined treatment of a received message into a first set of registers (238);

monitoring the first set of registers (238) in order to start processing a message once a process execution unit (240, 242, 244) is available for processing;

performing said determined treatment, whereby the processing is done sequentially, using parallel processing or a combination of both,

monitoring said first set of registers (238) in order to start presenting the result of the message processing once the processing of the message is complete; and

presenting the result of the message processing to be forwarded to a destination unit.

11. The method according to claim 14, further comprising the initial step of storing control information being used to

determine the treatment to be performed with a received message.



Patentwesen und Urheberrecht
Intellectual Property Department

IBM Deutschland GmbH
Pascalstraße 100
70569 Stuttgart
Brief: 70548 Stuttgart
Telefon (07 11) 7 85-0
Telefax (07 11) 7 85-52 59
ibm.com/de

European Patent Office

D-80298 München

Fritz Teufel, Dipl.-Phys.
Tel.: 0711/785-5250
10 December 2002 / jgi-bk ✓

International application No.: PCT/EP 01/12470

Ref.: DE919990094

In Response to the Written Opinion dated 12 November 2002

I

A new set of claims 1 to 11 is enclosed that shall replace claims 1 to 16 currently on file.

Amended description pages 4, 4a and 4b are enclosed that shall replace description page 4 currently on file.

II

The subject matter of claim 1 is now specified by introducing the feature of former claims 2, 3, 7 and 8.

Former claims 4 to 6 and 9 to 15 correspond to present claims 2 to 11.

The objected claim 16 has been removed. However, the applicant reserves the right to re-introduce the subject matter of claim 16 into the claims after completion of the international phase, if appropriate.

The amended description pages discuss the cited prior art.

III

Document D1, US-A-4 625 308 (KIM KAP S ET AL) 25 November 1986, discloses a block input processing. The block input task receives blocks transmitted from the front-end subsystem 13022. The primary functions of this task are to validate the cyclic redundancy check (CRC), to acknowledge (or negative acknowledge) the block based on the result of the CRC check, to validate the block sequence number and to assemble complete messages from the blocks. The message dispatcher task receives messages from the block input task and determines, by examining the message type, whether the intended message destination is the control subsystem itself or a lower-level subsystem (in the case of ambiguity, the message destination field is further verified to determine the destination subsystem). If the message dispatcher task determines that the intended message destination is a lower-level subsystem, the serial subsystem-control subsystem interface task is initiated which decodes the destination field and initiates message transmission to the appropriate serial subsystem. If the task determines that the destination is the control subsystem itself, the message-processing task is initiated which evaluates the message data and takes the appropriate action.

According to the known solutions an incoming message is dispatched to a particular lower-level subsystems that is responsible for further processing the incoming message. It is therefore necessary for the 'dispatcher' to know how to reach the respective subsystem and to address the dispatched message accordingly, which creates a significant processing overhead.

The object of the present invention is to improve the data processing between at least one network and at least one CPU.

The foregoing object is achieved by a method and a system as laid out in the independent claims. In particular, the object is achieved by the claimed device having a first execution unit (226) for receiving a message to be processed and determining the kind of treatment to be performed with the received message, wherein the first execution unit (226) comprises a memory device (236) for storing control information being used to determine the treatment to be performed with a received message, a second execution unit (239) for performing said determined treatment, wherein the second execution unit (239) comprises a first set of registers (238) for storing message specific information specifying the data contents and said

determined treatment of a received message, and wherein the second execution unit (239) is configured to monitor the first set of registers (238) in order to start processing a message once a process execution unit (240, 242, 244) is available for processing, and a third execution unit (230) for presenting the result of the message processing to be forwarded to a destination unit, wherein the third execution unit (230) is configured to monitor the first set of registers (238) in order to start presenting the result of the message processing once the processing of the message is complete.

According to the present invention a message is received to be processed and the kind of treatment to be performed with the received message is determined. Message specific information is stored specifying the contents of the received message and said determined treatment of a received message into a first set of registers (238). The first set of registers (238) is monitored in order to start processing a message once a process execution unit (240, 242, 244) is available for processing. The determined treatment is performed, whereby the processing is done sequentially, using parallel processing or a combination of both. The first set of registers (238) is monitored in order to start presenting the result of the message processing once the processing of the message is complete and the result of the message processing to be forwarded to a destination unit is presented.

The cited prior art from document D1 does not disclose the device or method as presently claimed. Therefore, the claimed invention is novel over D1.

Document D2, US-A-5 153 909 (BECKLE LEANN M ET AL) 6 October 1992, shows a central office (CO) based automatic call distributor (ACD) system arrangement for providing resource control and call event data processing services for a plurality of ACD systems, served by a switching system. The arrangement comprises a switching system, having a control processor complex (CPC), a special Event and Control Link (ECL) processor that performs ACD end-user call event data partitioning and ACD end-user resource allocation message screening, and one or more Management Information System (MIS) processors that perform data processing to derive statistics associated with calls to an ACD. The ECL receives, partitions, and transmits call event data messages from the CPC to the MIS processors. The ECL also screens resource allocation request messages, sent by ACD end-users to control the allocation of ACD resources, by checking that the messages match a

predetermined format, and by verifying that the end-user making the request has permission to make the requested resource allocation changes. Finally, the ECL interfaces with multiple MIS processors. These MIS processors can be located at the CO, the premises of an enhanced service provider, or on an end-user's premises. Advantageously, end-user call event data partitioning and resource allocation message screening is performed by the ECL without increasing the complexity of the CPC program, and an ACD end-user has a choice of options of using his own MIS processor, sharing an MIS processor provided by an enhanced service provider, or sharing an MIS processor provided in the switching system.

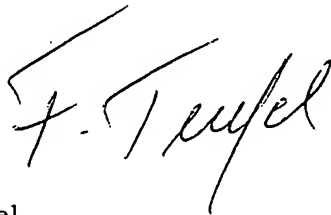
Also, document D2 does not disclose the device or method as presently claimed. Therefore, the claimed invention is novel over D2, too.

Furthermore, also a combination of the features of both Documents does not lead a person skilled in the art to the subject matter claimed in the independent claims.

Therefore, the subject matter as claimed is novel and involves an inventive step.

IV

It is now assumed that a fully positive IPER will be issued. Should there remain any further questions on the part of the Examiner, clarification by means of a telephone interview would be appreciated and is kindly requested hereby.



Fritz Teufel
European Patent Attorney

Encls:

New patent claims 1 to 11 (in triplicate)

Amended description pages 4, 4a and 4b (in triplicate)

PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Teufel, Fritz
IBM DEUTSCHLAND GMBH
Intellectual Property
Pascalstrasse 100
D-70548 Stuttgart
ALLEMAGNE

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year)	12.11.2002
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Applicant's or agent's file reference

DE919990094

REPLY DUE

within 1 month(s)
from the above date of mailing

International application No.

PCT/EP01/12470

International filing date (day/month/year)

27/10/2001

Priority date (day/month/year)

09/12/2000

International Patent Classification (IPC) or both national classification and IPC

H04L29/06

T: 12.12.02

Applicant

INTERNATIONAL BUSINESS MACHINES CORPORATION, et al

T. 12.12.02
Lier: jgi
ER

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain document cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 09/04/2003.

Name and mailing address of the international preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer / Examiner

Bertini, S

Formalities officer (incl. extension of time limits)

Barrio Baranano, A
Telephone No. +49 89 2399 8621



I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, pages:

1-25 as originally filed

Claims, No.:

1-16 as originally filed

Drawings, sheets:

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application,

☒ claims Nos. 16,

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 16 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A written opinion cannot be drawn due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

Inventive step (IS)

Claims 1-15

WRITTEN OPINION

International application No. PCT/EP01/12470

Industrial applicability (IA) Claims

2. Citations and explanations
see separate sheet

III. NON-ESTABLISHMENT OF OPINION

1. The subject-matter of independent Claim 16 is unclear (Art. 6 PCT).
Independent Claim 16 seeks protection for "A computer program product".
However, it is unclear what a computer program product should be.

A computer program product could be understood as

- the outcome (product) of a computer program, or
- a product (selling box) which contains a computer program stored on a CD, diskette etc., or
- the information or presentation of the computer program on a screen (e.g. a game).

Hence, the subject-matter of Claim 16 is unclear in general and with respect to the scope of protection sought.

In the present case it appears that it is the intention of the Applicant to seek protection for a computer readable medium (e.g. CD).

In order to overcome the clarity objection raised, it is proposed to formulate the wording of Claim 16 as follows:

"A product including a computer-readable medium with a stored computer program on it,

the computer program comprises instructions,
said instructions are

- adapted to
- adapted to
- adapted to

when the computer program is run on a computer system and fed with as
start variables,

the computer program generates:

-
-

The subject-matter of independent claim 16 is thus so unclear that an examination with respect to novelty and inventive step cannot be performed.

V. REASONED STATEMENT UNDER RULE 66.2(A)(II) WITH REGARD TO NOVELTY, INVENTIVE STEP AND INDUSTRIAL APPLICABILITY

1. The following documents are cited:

D1: US-A-4 625 308 (KIM KAP S ET AL) 25 November 1986 (1986-11-25)

D2: US-A-5 153 909 (BECKLE LEANN M ET AL) 6 October 1992 (1992-10-06)

2. Due to the broad formulation of its subject-matter claim 1 does not comply with the dispositions set out in Articles 33 (1), (3) PCT regarding inventive step.

Document D1, in fact, discloses (see passages cited in the Search Report) a message processing device for communicating with remote units over at least one data network and with at least one dedicated CPU in accordance to the main features of claim 1.

Document D1 indeed discloses a message dispatcher task, a multiplexer polling controller, a control subsystem, and in particular an input message processor, a network message processor and an output message processor in accordance with the 3 execution units of the present application.

The wording of claim 1 is much too general, so that the subject-matter of the claims is already known, in all essential aspects, from document D1; therefore, a skilled person in mobile Internet services, being aware of the disclosure of D1 can apply common general knowledge of the art and arrive at the apparatus of claim 1.

3. The independent claims 14 and 10 include exactly the same features, in terms of method features and apparatus features respectively. The Intercommunication processing system disclosed in claim 10 refer to the same basic concept already disclosed in claim 1 and therefore the inventiveness of the subject-matter of this claim can be regarded together with that of claim 1. The same applies to the subject-matter of claim 14 which includes, in terms of method features, exactly the

same features of apparatus claim 10.

In this particular case, the Examining Division is thus of the opinion that the same objection applies to the subject-matter of all the independent claims, even if some slight differences are obviously contained in their wording.

4. Dependent claims 2 to 9, 11 to 13 and 15 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step for the following reasons: the subject-matter of said claims is either directly derivable from prior art documents D1-D2 or represents minor design details generally known in the field of communications systems.

The subject-matter of dependent claims 2 to 9, 11 to 13 and 15 therefore does not involve an inventive step so that these claims do not comply with the dispositions set out in Articles 33 (1) and (3) PCT.

5. In amending the claims to meet the raised objections, the following points should also receive attention:
 - a) The claims should be properly drafted in the two part form recommended by Rule 6.3 (a) (b) PCT and should include reference signs in parentheses as required by Rule 6.2 (b) PCT.
 - b) The opening part of the description should be modified to bring it into agreement with any amended independent claims.
 - c) The prior art documents D1-D2 should be acknowledged in the description and the state of the art disclosed therein should be briefly discussed in the opening part of the description, Rule 5.1 (a) (ii) PCT.
 - d) To meet the requirements of Rule 6.1 (b) PCT, the claims should be renumbered consecutively.
 - e) The Applicant is requested to file amendments by way of replacement pages. He should also take into account the requirements of Rule 66.8 PCT. In particular, fair copies of the amendments should be filed in triplicate.

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/EP01/12470

- f) In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.